

A MEDIEVAL BURIAL IN QAL'AT AL-MARQAB AND ITS FACIAL RECONSTRUCTION

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The medieval Near East can only boast a relatively limited number of excavated human remains and this also applies for those territories that were under the control of the Crusaders in the 12th and 13th centuries. Especially rare are burials unearthed in castles and those that can be connected to members of the military orders, the fighting elite of the Crusader states. This adds a special importance to the grave that was opened in the summer of 2011 in the course of the excavations of the Syro-Hungarian Archaeological Mission in Qal'at al-Marqab. Combining the contemporary sources with the archaeological observations raised the possibility that the young adult, buried in a prominent section of the citadel, might have belonged to the Hospitaller community of al-Marqab. His skull was the subject of a detailed study and facial reconstruction project performed by experts from the Hungarian Natural History Museum.²

Few archaeological remains can be dated to the first century following the establishment of al-Marqab in 1062, and no trace of the burials from this early period has been found yet. This is partly due to the Order of St John, which purchased the site in February 1187 from its owners, the Mazoir family. The knights immediately set to the organizational and architectural transformation of al-Marqab, which made the castle the most important administrative centre of the Hospitallers in Syria and one of the most extensive Crusader fortified sites by the beginning of the 13th century.³ Next to the castle complex of the knights covering 6 hectares on the volcanic mountain plateau was an outer suburb which spread over an estimated 10 hectares of the western slopes of the castle mountain. This complex is one of just a few centres of the military orders that possessed its own treasury and chancellery and also had an Haute Cour operating within its walls.⁴ According to the description of the pilgrim Wilbrand von Oldenbourg in 1212 there were more than a thousand armed men serving even in peacetime.⁵ Similar to other garrisons of castles of military orders, only a minority here belonged to the Hospitaller elite – the sergeants-at-arms – but due to its prominent position amongst the Hospitaller hierarchy there must have been a relatively high number of full members of

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² The Syro-Hungarian Archaeological Mission is a joint research project of the Directorate General of Antiquities and Museums of the Syrian Arab Republic (DGAM) and the Pázmány Péter Catholic University of Hungary with other institutions also contributing with researchers, students and equipment. The Mission is directed by Edmond el-Ajji (DGAM), Marwān Hasan (DGAM-Tartous) on the Syrian side and Balázs Major PhD (Pázmány Péter Catholic University) on the Hungarian side. We would like to thank the Directorate General of Antiquities and Museums of the Syrian Arab Republic for the permits and the help we received through the years and would like to express our special appreciation to the kind and hospitable locals of Syria. The main supporter of the works is MOL – the Hungarian Oil Company. The anthropological research and the facial reconstruction were done with the support of the Hungaria Nostra Los Angeles Inc. Foundation and we owe special thanks for this to Mrs. Tamás Mattyasovszky-Zsolnay, Dr. Vécsey Esther. This article was prepared with the help of the Hungarian Scholarship Fund OTKA PD 77885.

³ For the brief history of al-Marqab see: Major, Balázs: The Master Plan of al-Marqab Citadel. Historical Background. In: *Project Defence System on the Mediterranean Coast. Euromed Heritage II. Project* (Spain, 2008), 162–174; [Major, Balázs: Bathing in the Medieval Latin East. A Recently Discovered 13th Century Bathhouse in al-Marqab Citadel \(Syria\). Magyar Régészet / Hungarian Archaeology 2013 Winter](#); [Major, Balázs: Medieval Cranes in Qal'at al-Marqab, Syria. Magyar Régészet / Hungarian Archaeology 2012 Winter](#).

⁴ Riley-Smith, Jonathan: *The Knights of St. John in Jerusalem and Cyprus c. 1050–1310* (Edinburgh: Macmillan, 1967), 460, 465.

⁵ von Oldenburg, Wilbrand: *Itinerarium Terrae Sanctae*, Itinera Hierosolymitana Crucisignatorum vol. III, ed. S. de Sandoli (Jerusalem: Franciscan Printing Press, 1983), 212.

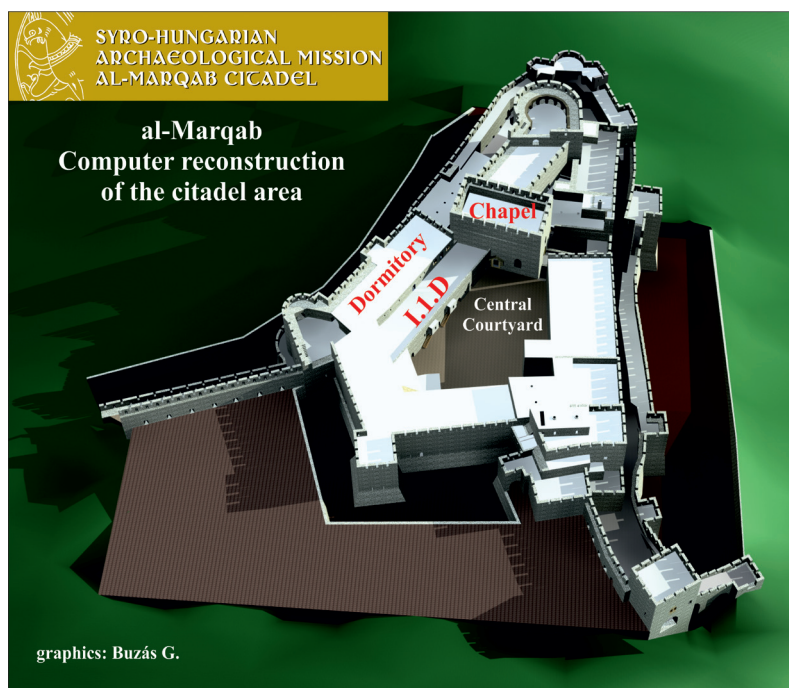


Fig. 1: The 13th century citadel with the labels of the buildings mentioned in the text (graphics: Gergely Buzás)

of Le Crac and Margat the Priors shall have candles burning in the same manner as is ordained for the church of Acre...”.⁶ Geophysical surveying conducted by the SHAM in 2008 did not find evidence of burials under the huge and mostly undisturbed pavement stones of the chapel. In addition, it is very unlikely that flagstones of this enormous size were intended to be subject to repeated removal, a fact which was further supported by the excavations in the central part of the chapel where no burials were found amongst the remnants of former structures levelled by the Hospitallers. The only area of the chapel that was intended to receive human remains was the pointed arch alcove in the northern wall of the chapel, which, judging from its prominent position and size must have been intended to hold a sarcophagus or a large reliquary. Given the fact that the entire area of the Hospitaller citadel was built upon or paved after 1187, the existence of a cemetery in the citadel area seemed very unlikely.

For this reason, the unearthing of an almost intact medieval burial at the southern end of the vaulting labelled I.I.D, which borders the central courtyard of the citadel from the east, came quite as a surprise in the summer of 2011. Previous excavations of the SHAM proved that the present fortress of the Hospitallers was constructed after levelling almost all of the former buildings found on the southern part of the mountain plateau. Amongst the first buildings to be constructed by the order was the chapel that bordered the central courtyard on the south, and the dormitory attached to it from the north and bordering the courtyard on the east. The former buildings of the Mazoir castle in the southeastern corner of the central courtyard were also demolished by the construction workers, who even cut part of the foundation wall of the chapel into an earlier wall running almost parallel to it.

The barrel vaulted hall labelled I.I.D was in all probability attached to the dormitory building over the eastern edge of the originally open courtyard in the very beginning of the 13th century.⁷ It seems to have been destined for industrial activities of some kind from the very beginning. Considering this fact, the burial found inside I.I.D must have predated the construction of the vaulting. The male body in the grave was buried in a way very characteristic of the Latin population of the Crusader states.⁸ It was placed in a shallow, east-

the order serving in al-Marqab, especially after the fall of its famous sister castle, the Crac des Chevaliers in 1271.

Although we must expect a considerable number of dead from the garrison of the border castle of al-Marqab, no burial that can be clearly connected to them has yet been discovered. As the skeletons of females and children showed, the 13th century cemetery of the outer suburb that was excavated by the SHAM in the summers of 2010 and 2011 was probably reserved primarily for the inhabitants of the civilian settlement.

The most obvious place for the burial of Hospitaller personnel would be the monumental castle chapel, which is explicitly mentioned in the statutes of the chapter general of September 1263, in connection with the duties of the priors for the souls of the deceased. In article no. 7 “...it is decreed that in the churches

⁶ King, Ernest Joseph: *The Rule Statutes and Customs of the Hospitallers 1099–1310* (London: Methuen, 1934), 67.

⁷ Major, Balázs: Medieval Cranes in Qal'at al-Marqab, Syria. *Magyar Régészet / Hungarian Archaeology 2012 Winter*, 4.

⁸ Boas, Adrian: *Archaeology of the Military Orders* (London: Routledge, 2006), 226.

west oriented grave with its head pointing towards the west and its arms crossed above its abdomen. The grave itself was covered with 30–40 cm of earth and contained no archaeological objects buried with the person.

As the chapel has no traces of burials, the southeast corner of the central courtyard that was not yet built upon and that was next to the northern entrance of the chapel, as close as possible to the holy area, would have made an ideal place for a cemetery for the knights. The well-built adult, possibly in his thirties, was buried in this prestigious area without any grave goods, which might point to the possibility that he belonged to the inner ring of the Hospitaller elite serving in al-Marqab. The statutes were very strict in prohibiting the possession of any personal belongings for the members of the order and this is clearly reflected in the decrees concerning the burials: “...if any of the brethren have made a disposition of private property at his death, and whilst still living shall not reveal it to his Master; let no divine office be celebrated for him, but let him be buried as one excommunicated; and if whilst still living he should have private property and he shall have concealed it from his Master, and afterwards it shall be found upon him, let that money be tied around his neck, and let him be led naked through the Hospital of Jerusalem, or through the other houses where he dwells, ...”.⁹ The existence of this grave raises the possibility that the early cemetery of the Hospitallers, before the second big construction wave, was in the southeastern corner of the central courtyard right beside the northern gateway to the chapel. The construction of the vault I.1.D must have necessitated the exhumation of the burials accumulated during the previous two decades or so. The reason for leaving this lone grave behind might come from the fact that this burial, which was likely from the early phase, was squeezed between the wall of the chapel and the foundation walls of an earlier structure, and thus it escaped the attention of the workers and the body remained at its original final resting place where it was placed at the end of the 12th century.



Fig. 2: The Hospitaller chapel as seen from the central courtyard of the citadel, with its northern doorway in the centre and vaulted ranges I.1.D on the left (photograph: Balázs Major)



Fig. 3: The grave during the excavation with the 12th century Mazoir foundation wall in the foreground and the wall of the Hospitaller chapel in the background. (photograph: Balázs Major)

⁹ King, Ernest Joseph: *The Rule Statutes and Customs of the Hospitallers 1099–1310* (London: Methuen, 1934), 25.

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CRANIOFACIAL RECONSTRUCTION OF A MEDIEVAL MAN FOUND IN THE CASTLE OF AL-MARQAB

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Upon seeing a human skull, one may wonder what the original living face might have looked like. It is a strange feeling to know that the former owner of this skeleton used to move around, eat and love. And it may seem a real mystery whether he was good looking or ugly, young or old at the time when he met his demise. Based on the scientific study of the bones, the answer to some of these questions can be provided. Nevertheless, in order to 'present' the appearance of the deceased, a special technique has to be employed – craniofacial reconstruction – which is equal parts an artistic and a scientific endeavour. With the help of facial reconstruction involving the skills of a sculptor, the original face can be restored to any intact skull. According to the state of development of the cranial bone surfaces for muscle attachment, the mass of the muscles may be estimated and conversely, from the shape of the bones the individual forms of the soft tissues may be inferred. We did not have on hand the original skull of the body that was buried at the Castle of al-Marqab, so the latest advances in modern technology and digital tools were employed to prepare a replica of the skull.

ANTHROPOLOGICAL DESCRIPTION

The skull and skeleton of the body found in the Syrian fortress of al-Marqab in the summer of 2011 were intact and in good condition. In spite of the fact that we had the opportunity to study the skeleton only in photographs, we were still able to perform photogrammetric measurements on the bones of the limbs.

The skull as a whole is masculine without strongly marked features, but strikingly regular and symmetrical. The most conspicuous of the sexual characteristics are the pronounced glabella (the 'space' between the two superciliary arches) and the bony superciliary arches, the slim but sizeable mastoids, the pronounced protuberances on the surface of the occipital bone, the thick zygomatic arch, the medium high and well-profiled zygomatic surface, the inverse 'T' shaped, slightly projecting genial process, the moderately grooved gonion, and the medium sized mandibular joint. Based on the anatomical features of sexual identity on the skull and the skeleton, we may conclude that the person in question is a male³ (Figs. 1–2).

In order to determine the age at the time of death, we observed the extent of cranial suture closure, and the wear on the teeth. The exterior line of the cranial sutures is fully open, based on which we may conclude that the man died at the beginning of his adulthood (aged between 25 to 35 years old). This fact is supported by his full set of healthy teeth, and the limited extent of abrasion on his teeth (25–35 years old).⁴

The data acquired from the dimensions of the skull demonstrate that the skull is moderately longish and very tall, the forehead is fairly wide, and while the lower face (from the genial process to the root of the

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³ Éry, Kinga – Kralovánszky, Alán – Nemeskéri, János: Történelmi népszerűségek rekonstrukciójának reprezentációja (Representation of the Reconstruction of Historical Populations). *Anthropológiai Közlemények* 7 (1963), 41–90; Acsádi, János – Nemeskéri, János: *History of Human Life Span and Mortality* (Budapest: Akadémiai Kiadó, 1970)

⁴ Nemeskéri, János – Harsányi, János László – Acsádi, János: Methoden zur Diagnose des Lebensalters von Skelettfunden. *Anthropologischer Anzeiger* 24 (1960), 103–115.



Fig. 1: Frontal view of the skull
(photograph: Tamás Wolf)



Fig. 2: Side view of the skull (photograph: Tamás Wolf)

nose) is quite narrow, the upper face (not counting the jaw bone) is fairly wide. The orbital cavity is fairly high and the nasal cavity is wide. The cranial capacity is large (1503 cm³).⁵

The body height is short to low-medium (160–165 cm).⁶ Viewed from above, the skull shape is oval and the occiput and the back surface of the skull are flat. The forehead runs moderately backwards and the orbital cavity is angular with rounded corners. The root of the nose is fairly deep, while the nasal ridge is fairly prominent and its line is wavy (concavo-convex). Seen from the front, the nasal ridge is slightly “inflated” (widened), and the nasal bones are slightly hour-glass shaped. The front lower nasal spine is short. The outline of the bony nasal cavity is pear shaped, and the lower edge is sharp (antropin). The upper dental arch is approximately parallel and the process of the dental socket projects slightly (mesognathia). The middle foetal suture (sutura metopica) of the frontal bone is still visible in adulthood. The canine fossa in the upper jaw bone is fairly deep and asymmetric (deeper on the right, more shallow on the left).⁷

We have examined the anthropological features of the young man based on 10 character types, and accordingly, classified him as Caucasian (Europid). His features place him closest to the ‘Mediterranean group’. The small or low-medium build is a classic (gracile) Mediterranean characteristic. An Atlanto- or Western Mediterranean characteristic is a build that is more robust than that of the gracilis Mediterraneans, with a more articulated skull outline, a very narrow but more angular face and a wider, thicker nose.

The appearance of the ‘Mediterranean group’ is quite diverse, depending on what kind of previous intermixing had taken place with other ethnic groups in the various geographical regions. Both the historical and present distribution of the ‘Mediterranean group’ is wide, with its representatives found anywhere on the shores of the Mediterranean Sea. The birthplace of the person in question is most probably found in the region of the most frequent occurrence of the ‘Mediterranean group’, namely the coastal areas of Western Europe, Spain, Southern France and the coastline of Italy.⁸

⁵ Martin, Rudolf – Saller, Karl: *Lehrbuch der Anthropologie I.* (Stuttgart: Gustav Fischer Verlag, 1957), 661; Alekseyev, Valeri Pavlovich – Debec, Georgi Francevich: *Kraniometriya. Metodika antropologicheskikh issledovaniy* (Cranio-metry. Methods of anthropological investigation) (Moskva: Nauka, 1964), 128.

⁶ Sjøvold, Torstein: Estimation of stature from long bones utilizing the line of organic correlation. *Human Evolution* 5 (1990), 431–447; Bernert, Zsolt: Data for the calculation of body height on the basis of extremities of individuals living in different historical periods in the carpathian Basin. *Annales historico-naturales Musei nationalis hungarici* 100 (2008), 385–397.

⁷ Lipták, Pál: *Embertain és emberszármazástan* (Anthropology and the Study of Human Origins) (Budapest: Tankönyvkiadó, 1971)

⁸ Farkas, Gyula: *Antropológiai praktikum I. – Paleoantropológiai metodikák* (Anthropological Practices I – Paleoanthropological Methods) (Szeged: József Attila Tudományegyetem, Természettudományi Kar, 1972), 229.

Pathological abnormalities cannot be found on either the skull or on the skeleton. The articular surfaces of the skeletal bones are intact, and no trace of distortion processes are found on the vertebrae. The teeth show the traces of slight ulatophy (2–3mm), which, given the intact set of teeth, could be due not to insufficient oral hygienic conditions, but to a diet of insufficient nutrition lacking vitamins. A curious fact is that the edge of the upper frontal teeth (right and left front incisors) – especially the one on the left – is worn in the shape of a wedge. This may point to a habit or activity that involved keeping a narrow and hard object (like a metal nail or string) between the teeth for a prolonged period of time (Fig. 3).



Fig. 3: The incisors worn into a wedge shape (photograph: Tamás Wolf)

FACIAL RECONSTRUCTION

Due to the fact that the original skull was not at our disposal, we had to rely solely on the photographs taken in situ and to use high definition CT scans in order to reconstruct the face. With the help of TondoSP1 Ltd, an exact, full-scale 3D plastic replica of the skull was made in Budapest. First, we made a 3D computer reconstruction based on the CT scans and then the virtual skull model was sliced up into 0.089 mm segments with the aid of software (MIMICS 10.01). A plastic replica of the skull that could be handled was manufactured with the help of a 3D printer (ZcorpDesignateCX Colour)⁹ (Fig. 4).

The method of facial reconstruction allows for the direct depiction of the features of people who lived in the past. Its essence is to rebuild the mimic and the masticatory muscles onto the skull based on the surfaces of the bones where the muscles attach.¹⁰ The thicknesses of the muscles and soft tissues were estimated through observing the extent of development of the surfaces where the muscles attach to 45 points on the skull, with consideration given to the average thickness of soft tissues from the amassed scientific data¹¹ (Fig. 5). The measurable data and formal characteristics were examined on the plastic replica of the skull. The facial features were modelled based on the unique formal characteristics and scientific methodological guidelines¹² (Figs. 6–7).

The frontal view of the reconstructed face is long, narrow and slightly angular. The eyebrows are powerful and projecting. The root of the nose is fairly deep, and the nasal ridge is wide and slightly inflated. The tip of the nose and the wings of the nose are also wide. The lips are fairly wide and full. The jaw has a firm outline and its tip is rounded. The eye slit is horizontal, and the total lack of an eye fold is obvious, which can be explained by the dorsiflexion of the upper rim of the eye sockets. From the side the forehead protrudes, curving back

⁹ Kustár, Ágnes – Pap, Ildikó – Végvári, Zsófia – Kristóf, Lilla Alida – Pálfi, György – Karlinger, Kinga – Kovács, Balázs – Szikossy, Ildikó: Tauber, Antónia, 18. századi váci apáca múmiájának patológiai vizsgálata és arcreekonstrukciója, 3D rekonstrukciós módszerek alkalmazásával (Pathological Examination and Craniofacial Reconstruction of the Mummy of an 18th Century Nun from Vác Using 3D Reconstruction Methods). *Anthropológiai Közlemények* 52 (2011), 5–15.

¹⁰ Árpás, Károly: III. Béla király és Chatillon Anna arcreekonstrukciója (Craniofacial Reconstruction of King Béla III and Agnes of Antioch). *Folia Anthropologica* 4 (2006), 5–19.

¹¹ Kustár, Ágnes – Skultéty, Gyula: A benepusztai honfoglaláskori férfi koponyarekonstrukciója (Cranial Reconstruction of a Conquest Period Man from Benepuszt). *Savaria* 22 (1996)/3, 179–190.

¹² Gerasimov, Mikhail Mikhaylovich: *The face finder* (London: Hutchinson and Co, 1971), 428; Taylor, Karen: *Forensic Art and Illustration* (Boca Raton – London – New York – Washington DC: CRC Press, 2001), 580.



Fig. 4: The plastic replica made by RP technology
(photograph: Balázs Major)

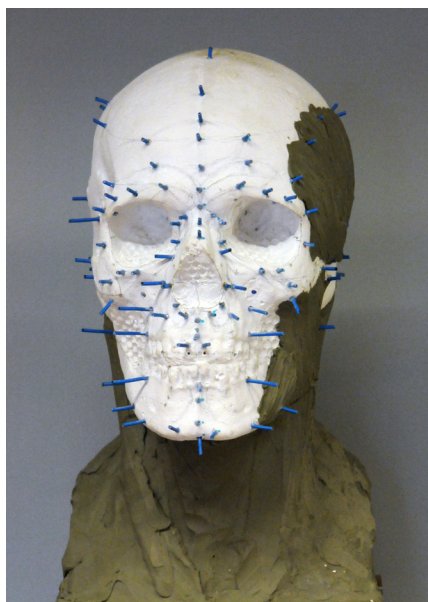


Fig. 5: The facial reconstruction was built onto the plastic replica of the original skull. The needles set into the proper locations show the thickness of the soft tissues. These helped in shaping the proper thickness of the mimic muscles during the process.
(photograph: Katalin Ozogány)

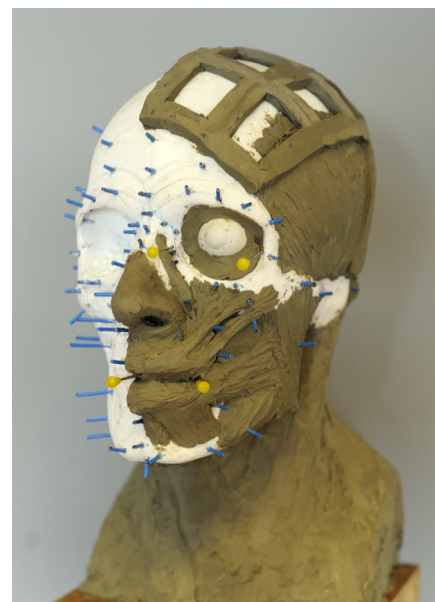


Fig. 6: First the neck and the masticatory muscles were modelled. It is vital to shape the mimic muscles carefully because their thickness and line contribute to the individual appearance of the mouth and the jaw. The muscles were reconstructed from modelling clay and plastic eyeballs were substituted in for the eyes.
(photograph: Katalin Ozogány)



Fig. 7: The 'skin covered' face has gained its ultimate features with the formation of mimic wrinkles appropriate for the age
(photograph: Katalin Ozogány)

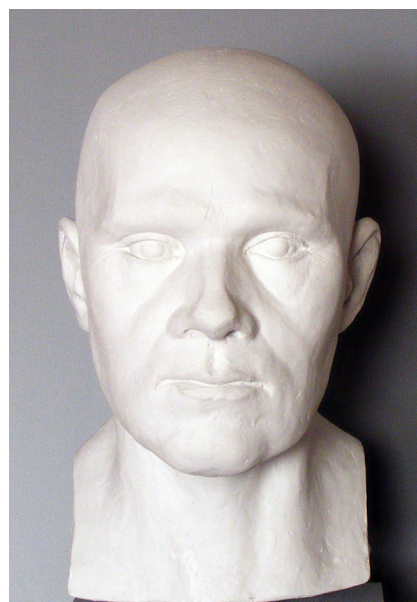


Fig. 8: The reconstructed face seen from the front
(photograph: Ágnes Kustár)



Fig. 9: The reconstructed face seen from semi-profile. The eyebrow, hair and facial hair was made from plaster according to the simplest style possibly worn by the Knights of St. John.
(photograph: Ágnes Kustár)



Fig. 10: The reconstructed face seen from the front – free, artistic design (photograph: Bendegúz Takáts)



Fig. 11: The reconstructed face seen from semi-profile – free, artistic design (photograph: Bendegúz Takáts)

slightly, and the back surface of the skull (the lambda area) is flat. The nasal ridge is fairly prominent and very slightly curved. The tip of the nose is rounded and slightly upturned. The upper lip juts a bit forward compared to the lower one. The gonion and the jaw have a sharp line, while the genial process is rounded and curved slightly forward. The individual shape of the ears and their formal characteristics cannot be interpreted from the skull, so we have matched the shape of the ears and their size to the features of the face. There has been no data yet found concerning his nutritional level, so we presumed an average level of nourishment when working on the reconstruction (Figs. 8–9). Using an identical thickness of soft tissues, we employed two methods for reconstructing the face. The first was made with strict scientific restraint (Figs. 5–9), while the other we modelled in a freer, more unreserved manner (Figs. 10–11). Beside the fact that both reconstruction methods resulted in depictions with a similar basic character, this also provided us with the opportunity during the fabrication process to experience the advantages and disadvantages of the two approaches methodologically.

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